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COMPLETE SPECIFICATION.

Improvements in Fastenings for Wearing Apparel, Bandages, and the like.

We, GABRIEL SCHRÖDER Modeller, of 17 Winkelsfelder Strasse and SIMON COHEN, Merchant of 17 Schadowstrasse, both of Düsseldorf in the German Empire, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The ordinary devices for fastening garments, boots, gloves and the like have the great disadvantage of requiring a considerable amount of time in their use. The object of this invention is to remedy this inconvenience while securing the advantage of greater simplicity and more certain action compared with other similar fastenings.

The improved fastening consists essentially of a number of rigid or elastic clamps fixed upon a band, cord, chain or their equivalent, which with their hook shaped ends embrace or grip beadings or ledges formed or arranged at the edges of the opening to be closed. The said clamps are advantageously so attached to the band, cord chain or the like that they can be brought into any position thereon independently of each other, whereby the invention is rendered specially applicable for bandages for orthopædic and surgical purposes, as at particularly painful places, such as boils or swellings, where a one-sided pressure is to be avoided, the clamps can be so shifted that they do not touch these places.

On the drawing appended hereunto the subject of this invention is represented in several modified forms of execution.

Figs. 1 and 2, show one form of the improved fastening with opened and closed edges of the article to be fastened,

Fig. 3, a section of the same along line xx of Fig. 1 on an enlarged scale and

Fig. 4, a perspective view of the fastening;

Fig. 5, represents a special form of the clamp in perspective view.

Fig. 6, represents the fastening with the clamps arranged so that they can be shifted on the band or its equivalent carrying the same.

Figs. 7, and Figs. 8 and 9, show two modified arrangements of the improved fastening.

As seen from Fig. 3, the ends of the clamp a are formed as hooks a^1 which embrace or grip the beadings or ledges b on the edges to be fastened together. In the fastening represented by Figs. 1, 2 and 4, these clamps a are fixed upon a chain c or its equivalent at certain distances from each other. At the point where the closing of the opening commences one end of the chain c or its equivalent is attached to the article. In the opened position the clamps as shewn by Fig. 1, are pushed together, so that the edges below them can be opened out. When the free end d of the fastening is pulled, the clamps a slide along the beadings or ledges and draw the edges together, the intermediate lengths of chain being successively stretched thereby as shewn by Fig. 2. To unfasten the article the clamp next to the free end d of the chain c is pushed in the opposite direction and takes the other clamps successively along and pushes them together into the positions shown by Fig. 1, whereby the edges of the opening are unfastened.

The clamps a are preferably provided with tightening springs f on their inside, as shewn by Fig. 5, which may be fixed to any convenient part on the underside of the clamps and effect a secure gripping and pressing of the edges of the

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opening. It is immaterial where these springs are attached, as an instance, they are shewn fixed to the middle part of the clamp *a*.

In order to permit the shifting of the clamps independently of each other, as has been found necessary in the case of bandages even when the fastening is to close the opening completely, they may be arranged for instance as shewn by Fig. 6. 5
The middle bar of the clamp *a* is in this case made with two slits *g*¹ corresponding to the width of a band *g*, which is drawn through them. When the entire fastening is operated by pulling the band, the frictional braking produced by the slits upon the band drawn through them is sufficient to cause the clamps to follow the pull of the band and slide on the edges of the article and finally remain at rest at their 10
predetermined distances. If now in the case of bandages for example the pressure of the clamps is to be avoided at certain places, the respective clamp or clamps is or are shifted singly to another part of the edges, as can readily be done, so that these places remain free from clamps.

Another modification of our improved fastening is shewn by Fig. 7, which is 15
intended to open the fastening self-actingly. In this case the band, chain or cord is replaced by a helical spring *h*, upon which the clamps are fixed at such points that when the spring is in its unstretched state, the clamps are close together similarly as shewn by Fig. 1. In using the fastening, by separating the clamps, the spring *h* is stretched, and its free end fastened to a button or the like on the 20
article, and as soon as this end is released, the spring draws the clamps together again and opens the fastening.

The same effect is obtained by the modified arrangement represented by Figs. 8 and 9, in which the clamps are arranged on the levers *i*, of a lazy-tongs, the pins 25
connecting the ends of the levers moving in slots of the clamps, and the tongs being drawn together by means of springs. These springs may be torsion springs arranged at the central pivots *k*. It is evident that this fastening when released will self-actingly draw the clamps *a* together along the ledges *b* into the position shewn on Fig. 9, and liberate the edges of the opening.

Having now particularly described and ascertained the nature of our said inven- 30
tion and in what manner the same is to be performed, we declare that what we claim is :—

1. The construction and arrangement of fastenings for wearing apparel, bandages and the like consisting of rigid or elastic clamps sliding on and embracing ledges or beadings on the edges of the opening to be closed and attached to a band, cord, 35
chain or their equivalent at permanent or variable distances from each other, substantially as hereinbefore described and illustrated by the drawings.

2. The combination of raised beadings or ledges formed at the edges of an opening in wearing apparel, bandages and the like and clamps fixed to a band, cord, chain or their equivalent, which by pulling said band, cord, chain or equivalent, 40
are caused to slide on said beadings or ledges, substantially as described and illustrated by the drawings.

3. In fastenings for wearing apparel, bandages and the like consisting of connected clamps sliding on ledges on the edges of the opening to be closed, making the clamps adjustable on the band or equivalent connection independently of each 45
other, substantially as hereinbefore described with reference to Fig. 6 of the drawings.

4. In fastenings for wearing apparel, bandages and the like, as specified in the first claim, the arrangement of the clamps so that under the action of a spring or equivalent elastic device the clamps self-actingly slide into the opening position 50
when the fastening is released substantially as hereinbefore described and illustrated by the drawings.

5. In fastenings for wearing apparel, bandages and the like as specified in the first claim, the arrangement of the clamps on a helical spring attached at one end to said articles substantially as hereinbefore described with reference to Fig. 7, of 55
the drawings.

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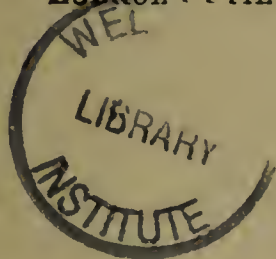
6. In fastenings for wearing apparel bandages and the like as specified in the first claim the arrangement of the clamps on the levers of a lazy-tongs subject to the action of springs substantially as hereinbefore described with reference to Figs. 8 and 9, of the drawings.

- 5 7. In fastenings for wearing apparel, bandages and the like with sliding clamps, the arrangement of tightening springs in the clamps, substantially as hereinbefore described with reference to Fig. 5.

Dated the 30th day of August 1896.

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[This Drawing is a reproduction of the Original on a reduced scale]

Fig. 1.

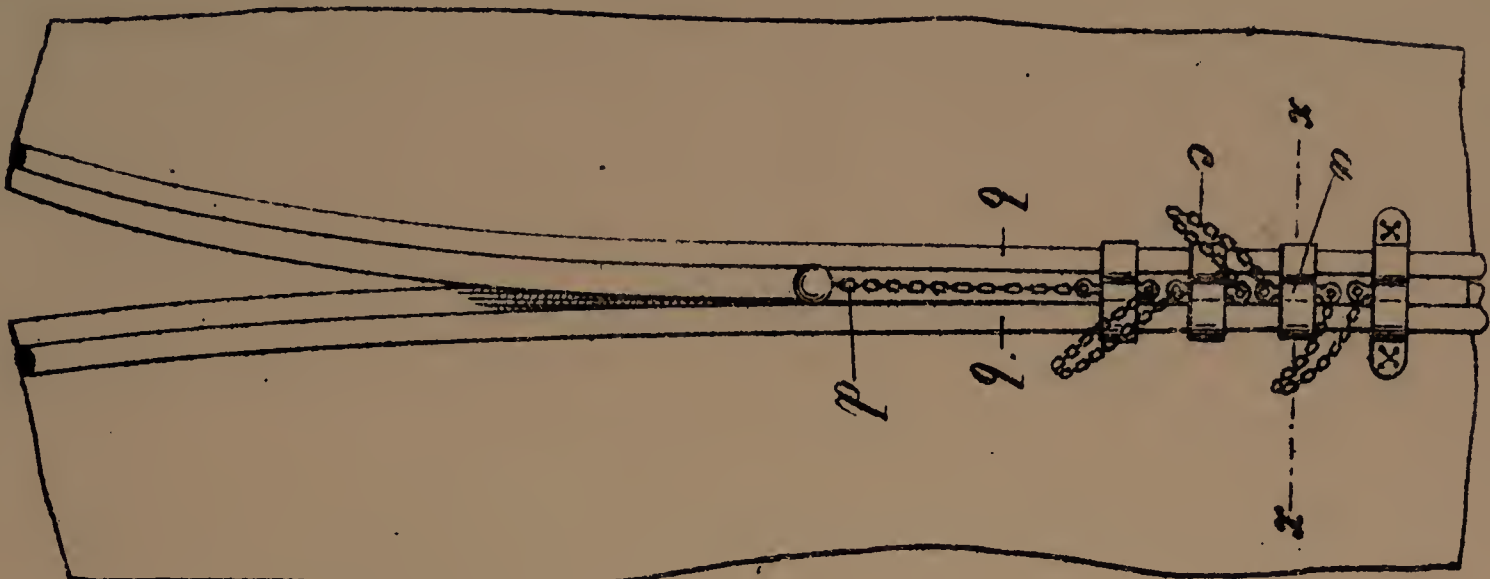


Fig. 2.

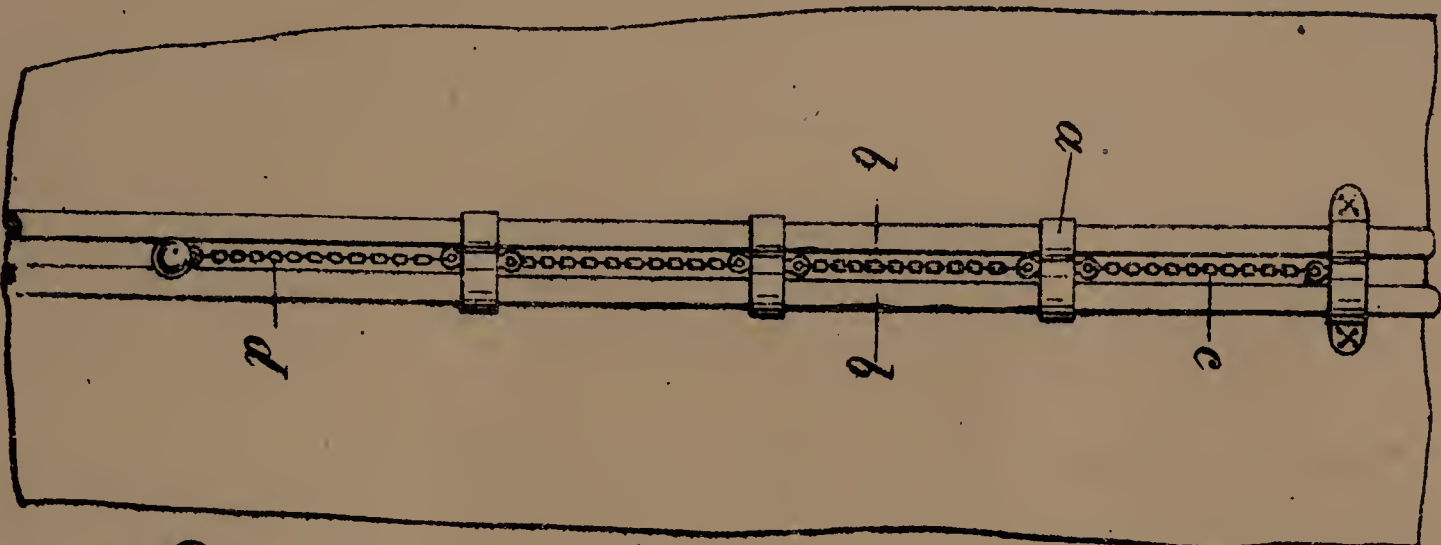


Fig. 3.

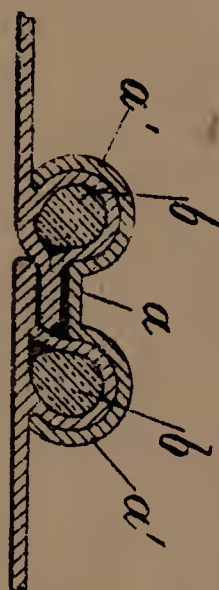


Fig. 4.

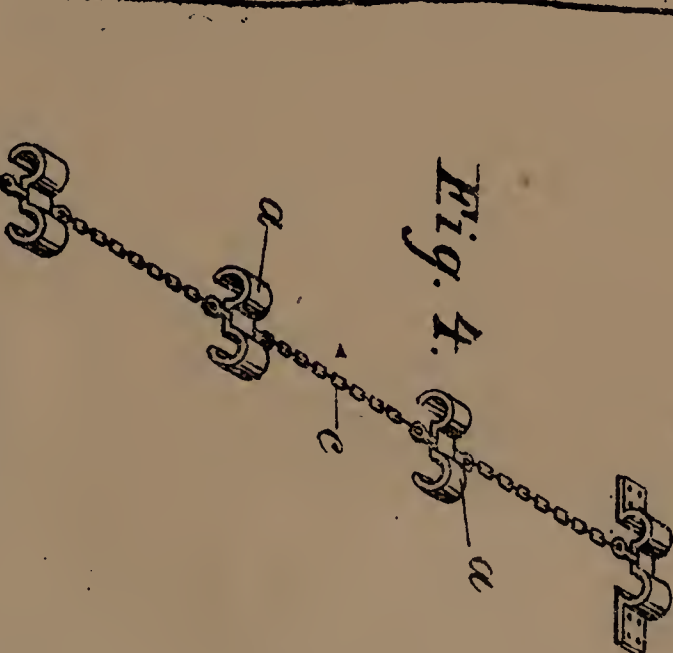


Fig. 5.

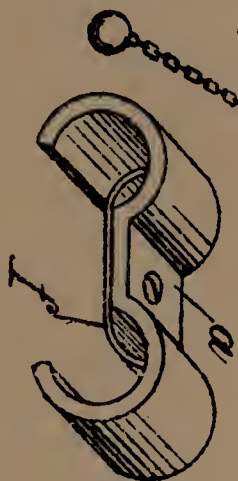


Fig. 7.

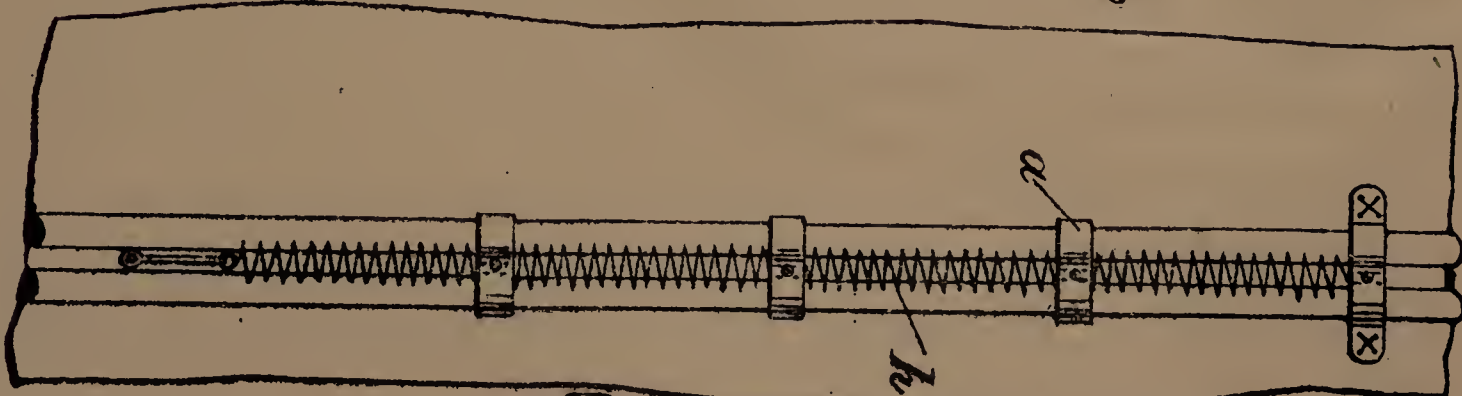


Fig. 8.

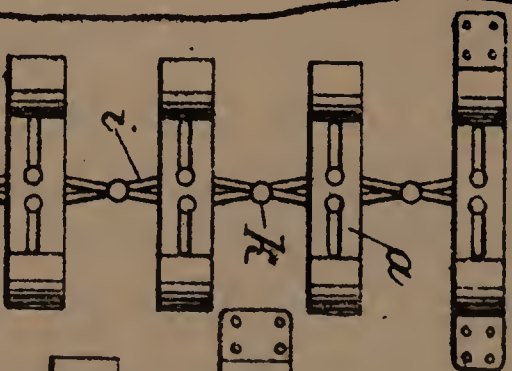


Fig. 6.

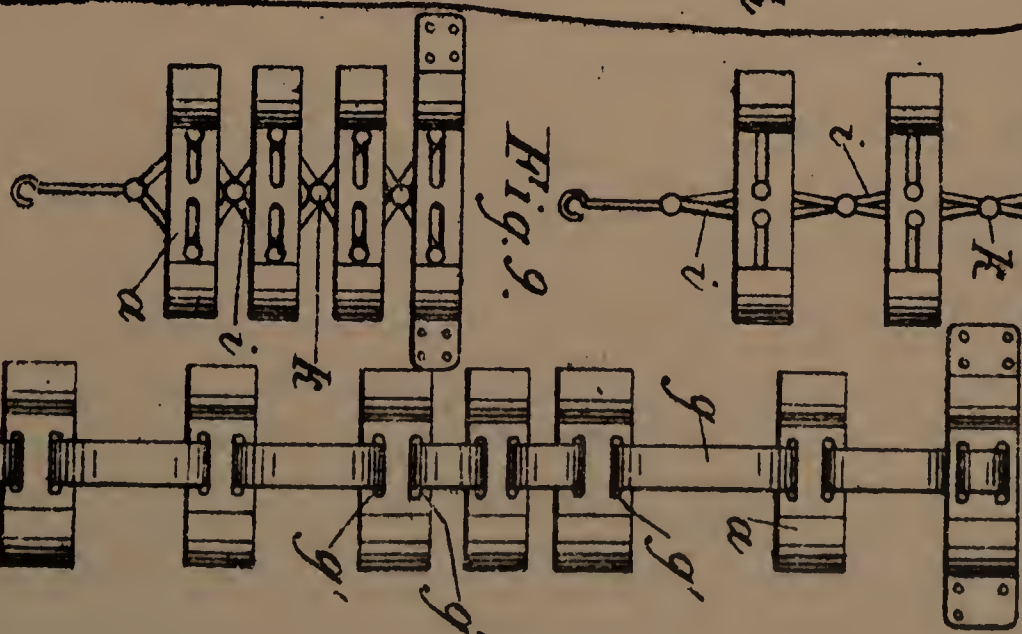


Fig. 9.

